ABSTRACT

There is provided a valve actuation linkage mechanism for use in an internal combustion engine that reduces friction wear on the valve assembly during engine operation and can be pre-assembled to reduce manufacturing time and costs. The valve actuation linkage mechanism comprises a rocker arm having a pivot rod cup, a pivot rod, a valve bridge having a pivot rod chamber, and a pivot rod retainer. The pivot rod comprises a pivot rod head, a pivot rod neck, a pivot rod body, and a pivot rod bottom. The valve bridge comprises a middle valve bridge section having the pivot rod chamber and a pair of pivot rod retainer securing bore, a bottom valve bridge section, and a lubricant dimple in the pivot rod chamber. The pivot rod retainer is comprised of a pivot rod orifice having pivot rod prongs and at least one securing orifice.